InterDigital®
Creating a Wireless World

InterDigital Communications Corporation
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March 15, 1996

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. - Room 222
Washington, D.C. 20554

Re: InterDigital Communications Corporation
Comments in WT Docket No. 96-18

Dear Mr. Caton:

Transmitted herewith are an original and 10 copies of the comments of InterDigital Communications Corporation in the above referenced proceeding.

Please direct any inquiries regarding this matter to the undersigned.

Sincerely,

Brian G. Kiernan
Vice President

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Revision of Part 22 and Part 90 of the	)	WT Docket No. 96-18
Commission's Rules to Facilitate Future	)	
Development of Paging Systems	)	

COMMENTS OF INTERDIGITAL COMMUNICATIONS CORP.

I. INTRODUCTION

InterDigital Communications Corporation ("InterDigital") respectfully submits these comments in the above captioned proceeding. InterDigital is a wireless technology manufacturer that markets an advanced spectrum efficient digital radio system which operates in the U.S. under current Basic Exchange Telecommunications Radio Service (BETRS) rules.[1] This system provides fixed wireless local loops between telephone central offices and customer premises.

InterDigital's advanced digital radio system, called the UltraPhone, is based on digital time division multiple access (TDMA) techniques which allow multiple users to simultaneously share a single radio channel.

InterDigital is the primary supplier of radio equipment to the telephone industry for the purpose of providing wireless local loops under the FCC's BETRS rules.

BETRS installations are uniquely rural applications used where wire-based facilities are impractical. The vast majority of BETRS installations throughout the country use advanced digital radio equipment operating in the 454 MHZ band which is one of the frequency bands discussed in this Notice.

Although there are frequency authorizations for BETRS at 150 and 800 MHZ, there is no equipment available in these bands that can provide telephone-quality BETRS service. As a result, nearly all BETRS installations rely on the availability of the 26 frequencies at 454 MHZ currently shared with Public Land Mobile Service generally and paging companies specifically.

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[1] 47 C.F.R. Section 22.600.

The action proposed by the Commission in this notice to geographically license these frequencies to paging companies at the expense of rural BETRS applications will have the unintended result of "killing-off" the BETRS service. In turn, rural subscribers, for whom there is no cost effective alternative, will completely lose the ability to access the telephone network.

These unintended consequences are the result of the naive belief on the part of the Commission that all wireless systems can serve the same customer base. In other words, that cellular radio or PCS could be used to provide BETRS.

The record, well established and resident at the Commission, proves otherwise. In 13 years of operation, not one cellular system is in operation providing BETRS service to rural telephone subscribers. The same is true of SMR, and nothing in the voluminous record of PCS reflects any hope that PCS will be any different. In fact, the vast distances involved in providing rural BETRS loops argue against PCS as a solution.

Rural BETRS installations are used as an adjunct of the wireline infrastructure to provide basic telephone service to subscribers that otherwise would be unserved or that could be served by wire only at prohibitive cost to the ratepayer and the telephone company. In effect, BETRS installations are employed to help lower the overall average costs of telephone service in rural locations while improving the existing service, promoting universal service, and helping to lower the need for rural subsidies, both state and federal.

In proceedings such as this, when the telecommunications needs of rural areas come into conflict with the needs of commercial paging, the needs of rural areas should be given primary consideration by the Commission.

II. DISCUSSION

In the Notice of Proposed Rule Making ("Notice") issued in the above-captioned proceeding, the Commission proposes to transition all paging frequencies (including the 454MHz band shared with BETRS) to a geographic licensing approach.[2]

Further, the Commission proposed to license the areas based on major trading areas (MTAs). If this proposal is adopted with the shared BETRS 454 MHZ band included, the use of BETRS to improve rural telephony and advance universal service would be eliminated.

The Commission did, in the notice, recognize the public interest in extending basic telephone service to rural areas. They said: "In the competitive bidding second Report and Order we determined that, because of the public interest in extending basic telephone service to sparsely populated areas, competitive bidding should not be used to select between BETRS and Public Mobile applicants."[3]

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[2] Notice at 4.

[3] Id at 17.

Notwithstanding this recognized public interest, the Commission goes on to ask whether competitive bidding should be used to select between paging and BETRS applications. Further, the Commission asks for comment on whether to allow geographic partitioning of license areas to make spectrum available for BETRS in sparsely populated regions.[4] The Commission likens this proposal to the geographic partitioning allowed in PCS which permits rural telephone companies to form bidding consortia to acquire a partitioned license.[5]

These series of questions underscore the twin fallacies of logic employed in this part of the Notice: (1) the Commission's belief that PCS (like cellular) can be used to provide wireless loops to integrate remote subscribers into the telephone network; and (2) the belief that adding remote subscribers to the telephone network is a money making enterprise that can be pursed by competitive bidding.

The record is solid on the first point. In proceeding after proceeding, the industry has told the Commission that cellular has not and will not provide BETRS service to remote subscribers in sparsely populated areas. The point that cellular is not a substitute for BETRS was made in several recent petitions such as WT Docket 95-115.[6] However, a petition for rule making submitted by the telephone industry makes the point most forcefully. The Petition was jointly filed by the United States Telephone Association ("USTA"), the National Telephone Cooperative Association ("NCTA"), the Organization for the Protection and Advancement of Small Telephone Companies ("OPASTCO"), the National Rural Telephone Association ("NRTA") and the Rural Electrification Administration ("REA") (collectively "Petitioners").[7] In it, they provided empirical evidence and practical reasons why cellular does not provide BETRS service.

The confusion over cellular providing BETRS is based on the casual assumption that "fixed cellular" and "BETRS" are synonymous. That assumption is incorrect. While a cellular carrier can provide fixed service to a willing subscriber and charge whatever rate is appropriate to the situation, a local exchange carrier is under the jurisdiction of state utility commissions for the rates it charges for basic telephone service.

Local exchange carriers normally provide telephone service on a state-wide averaged basis under tariffed rates approved by the state utility commission. Various Federal and state subsidy mechanisms exist to assist rural telephone companies in keeping the costs of telephone service within reach of all subscribers. As a result, basic telephone service (BETRS or wireline) is normally priced below direct embedded cost.

Additionally, the location of most cellular systems do not correspond to the location of potential rural fixed radio-based subscribers. To maximize the profit potential of cellular radio, the rural cellular carriers place base stations where the highest concentration of people or vehicles occur -- normally towns

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[4] Id at 17.

[5] Id at 17, 18.

[6] Amendment of the Commission's Rules and Policies to Increase Subscribership and Usage of the Public Switched Network, FCC 95-281, released July 20, 1995.

[7] Public Notice Report No. 1923 (RM-8159, released Jan. 8, 1993) at page 6.

and highways. The BETRS subscribers, on the other hand, normally reside where wired telephone service is either inadequate or nonexistent -- distant from towns and highways.

BETRS and fixed cellular serve different needs. BETRS, is an extension of the wire-based infrastructure of telephone companies. Its purpose is to lower the cost of local loops and thereby drive down the overall average cost of telephone service. BETRS has the potential to help hold down local telephone rates and reduce the subsidies, thus helping ensure universal service at affordable rates.

The Commission proposal, to partition and therefore require rural telephone companies to pay for BETRS spectrum, runs counter to the objective of reducing the overall access cost of the network. The aim of achieving affordable rates is not enhanced by adding spectrum costs to the wire/radio formula.

The public interest is not the primary concern of commercial radio providers like cellular and PCS. Profitability is the primary concern. If it's not **profitable**, they won't provide the service. In the case of BETRS, it is economically infeasible to build radio-telephone links in rural areas without some population density or vehicular traffic. Rural areas with population density or vehicular traffic already have wired telephone service. That's why cellular (and PCS) have not built and will never build BETRS facilities.

The second point should be obvious. BETRS is not a lucrative commercial enterprise. If it was, then cellular and PCS companies would be rushing to remote areas to sign up these unserved populations. Telephone companies, on the other hand, have the ability to average costs across a larger base and therefore provide service to "high cost" subscribers at a low average rate. There are also subsidies in place to help rural telephone companies bring these unserved subscribers onto the telephone network.

To restate the obvious, the need for BETRS is well established. The public interest in supporting improved telephone service in rural areas is not in question. However, the Commission's proposal ignores this public interest and proposes rules that would effectively eliminate BETRS.

In the recent enactment of the Telecommunications Act of 1996, Congress recognized the need for select treatment of rural areas and the rural telephone companies that provide service to these areas. In section 251 (f)(1), Congress exempted certain rural telephone companies from the obligations contained in section 251 dealing with competitive interconnection. Congress' attention to the obligation of rural telephone companies, and the important public interest served by providing rural telephone service, should not be lost on the Commission. The Commission, in this proceeding, should do no less than Congress. The Commission should recognize the public interest served by BETRS and exempt BETRS providers from the provisions aimed at commercial paging providers.

This can be done quite simply by carving out a BETRS exemption (at 454 MHZ) that permits BETRS licensing to continue within the larger geographic license areas proposed. This should cause no problems in most cases. As the Commission noted, "Because areas served by BETRS are sparsely populated, they typically are not sought by paging operators."[8] Accordingly, carving out a BETRS exemption on the 454 MHZ frequencies should be simple. This is especially true because of the availability of other common carrier paging channels in these remote areas. There are over 120 common carrier paging channels available nationwide, but only 26 shared BETRS channels.

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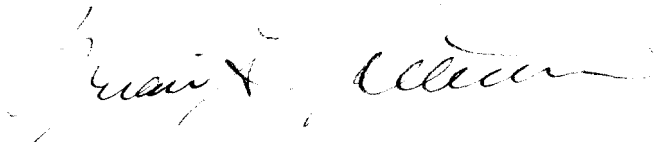
[8] Notice at 17

In carving out the exemption, the Commission should be very sensitive to the high power and long range of paging operations and therefore insure adequate spacing between BETRS and paging licensees in rural areas. In the unlikely event of a mutually exclusive application, the Commission should favor BETRS with a comparative advantage over paging, especially if other paging channels are available.

III. CONCLUSION

The Commission should follow the lead of Congress and carve out a "rural exemption" for the provision of BETRS. To do less would destroy BETRS and undermine the public interest in providing affordable and universal telephone service in rural areas.

Respectfully submitted,



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